AN ANALYSIS OF THE PHYSICALLY HANDICAPPING CONDITIONS OF SECONDARY SCHOOL STUDENTS IN NORTHEASTERN AND CENTRAL KENTUCKY

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The Problem: The primary purposes of this study were: to conduct a survey of the existing physically handicapping conditions among students in selected public secondary schools in Northeastern and Central Kentucky; and to determine the need in regard to special physical education activities for the handicapped children in these schools. The secondary purpose of this study was to develop, for those schools, if any, in which the need had been expressed, recommendations for special physical education activities.

Source of Data: The study included twelve public secondary schools which were affiliated with the Morehead State University Student Teaching Program in the 1967-68 school year. Only those principals who responded to a questionnaire stating that a set of appropriate recommendations of special physical education activities is needed in their high school were incorporated into the study.

Procedures: The initial aspect of the study was the development of a questionnaire to accurately determine the number of students who were afflicted with a specific physical handicap. The questionnaire was hand-delivered, by the writer, to the principals of each of the twelve public

high schools in Northeastern and Central Kentucky which were selected for this study. Approximately two weeks after the questionnaire was delivered, the writer returned to the schools, collected the questionnaires, and tabulated and analyzed the results. The results of the returned questionnaires were analyzed according to the number of handicapping conditions that were found to exist in each school. The questionnaire was designed to determine whether a need exists for the development of a set of recommended special physical education activities in the Morehead State University service area. The writer developed a set of appropriate recommendations of special physical education activities to meet the needs of the physically handicapped students. Characteristics were defined and listed for all of the physically handicapping conditions with which this study was concerned.

Findings: 1) One principal stated that an adequate program of special physical education currently was being provided; but he also stated that he would like assistance in developing his program further.

2) One principal was of the belief that an adequate program of special physical education was not currently being provided in his school; but he reported that he would not be interested in assistance in developing a program of this nature.

3) In the eleven selected secondary schools, there was no report of any student afflicted with blindness.

4) The most frequently occurring physically handicapping condition, as reported from this study, was dysmenorrhea.

5) Every principal in this study reported at least one case of

obesity.

6) Speech disorders were reported to exist in ten of the eleven schools.

7) A hearing loss above sixty decibels was reported to exist in only one school.

8) No church, YMCA, or physical therapy units are presently being provided for these physically handicapped students in or around these schools.

9) The most frequently occurring physically handicapping conditions were all incorporated into the study.

Conclusions: 1) An analysis of statements from specialists in the field of special physical education suggest specific activities that have been found to be successful in the field of special physical education.

2) A need exists for the development of a set of recommended special physical education activities in the Morehead State University service area.

3) An adequate program of special physical education is not currently being provided for the physically handicapped students within the public high schools in Northeastern and Central Kentucky.

4) There is not an adequate program of special physical education currently being provided for students at the undergraduate or graduate level in the Morehead State University curriculum.

Accepted by:

Gary A. Davis, Chairman

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AN ANALYSIS OF THE PHYSICALLY HANDICAPPING CONDITIONS OF SECONDARY SCHOOL STUDENTS IN NORTHEASTERN AND CENTRAL KENTUCKY

A Thesis

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by

Robert Edward Cipriano

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Accepted by the faculty of the School of Education, Morehead State University, in partial fulfillment of the requirements for the Master of Arts in Education degree.

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CHAPTER I

INTRODUCTION

I. STATEMENT OF THE PROBLEM

The primary purposes of this study were: to conduct a survey of the existing physically handicapping conditions among students in selected public secondary schools in Northeastern and Central Kentucky; and to determine the need in regard to special physical education activities for the handicapped children in these schools. The secondary purpose of this study was to develop, for those schools, if any, in which the need had been expressed, recommendations for special physical education activities.

II. NEED FOR THE STUDY

This study was developed as a result of numerous discussions, concerning special physical education, with physical education teachers, both men and women, and school principals who were employed in Northeastern and Central Kentucky. These educators were of the belief that a need existed for programs of special physical education.

The physically handicapped child leads a limited and qualitatively-different social life from that of the normal child. Despite this fact, Howland related:

> He (the physically handicapped child) wants to meet success and failure, and he wants the satisfaction of belonging to his group,

no matter how abbreviated or modified the experience may be.[1]

Because games, dances, and other physical activities usually are enjoyed by the physically handicapped student, the physical educator is in a strategic position to aid in the development of social as well as physical goals. Under proper supervision, the handicapped students in their association with children of similar disabilities and with normal children, are able to develop companionship and other social learnings (the "give and take" of physical education activities provides for learnings other than physical).

According to Fait, participation in a program of special physical education helps the handicapped child to, ". . . achieve optimum physical, mental, and social growth."[2]

For the most part, throughout our educational system, little emphasis has been placed upon the education of the handicapped student. Fait reported that:

> Although the special physical education program is one of the more recently developed services for the handicapped, . . . the correction and improvement of motor functions of the body through exercise--is an ancient one.[3]

The handicapped child is no exception to this need. There are various learnings from motor activities which are of consequence in the total development of these handicapped children. He further reported

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[1]Ivalclare Sprow Howland, Adapted Physical Education in Schools (Iowa: William C. Brown Company, 1959), p. 1.

[2]Hollis F. Fait, Special Physical Education: adapted, corrective, developmental (Philadelphia: W. B. Saunders Company, 1966), p. 38.

[3]Ibid., p. 8.

that, "As late as 1954, less than 5 percent of the secondary schools had special physical education."[4]

Physical education affords the child an opportunity to bring together diverse elements of his environment, thereby making a new and meaningful whole. Physical education plays a potentially vital role in the education of our children. This study is based upon this concept.

III. DEFINITION OF TERMS

The terms which appear throughout this study have been defined below.

Special Education

Special education is the education of students who deviate so far physically, mentally, or socially from the relatively homogenous groups of so-called "normal" pupils that the standard curriculum is not suitable for their educational needs; it involves the modification of the standard curriculum in content, method of instruction, and expected rate of progress to provide optimum educational opportunity for such pupils.[5]

Adapted Physical Education

Adapted physical education refers to the adjustments which are

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[4] Ibid., p. 6.

[5] Carter V. Good, Dictionary of Education (New York: McGraw-Hill Series in Education, 1945), p. 381.

made to meet the needs of the physically handicapped students.[6]

Corrective Physical Education

Corrective physical education refers to programs that emphasize the change or improvement in function or structure of the handicapped condition by means of selected exercises.

Developmental Physical Education

"Developmental physical education stresses the development of motor ability and physical fitness in those who are below the desired level."[7]

Special Physical Education

Special physical education refers to a physical education program that has as its chief purpose adapted, corrective, and developmental outcomes for the physically handicapped student.

Normal Individuals

Normal individuals are defined as those who display reactions and behavior patterns which are the most prevalent and the most widely accepted by our society.[8]

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[6]Hollis F. Fait, Special Physical Education: adapted, corrective, developmental (Philadelphia: W. B. Saunders Company, 1966), p. 3.

[7]Ibid.

[8]Fait, op. cit., p. 2.

Physically Handicapped Individuals

Physically handicapped individuals refers to those individuals who because of physical differences cannot display the reactions and pattern of behavior of the normal segment of society.[9]

Special Physical Education Class

Special physical education class refers to a physical education class which has handicapped students participating in adapted, corrective, and developmental activities.

Regular Physical Education Class

Regular physical education class refers to a physical education class which has normal students engaging in regular activities.

Atypical Student

The term atypical is used to identify the individual with certain physical handicaps or defects which may limit his activity to use fully all his body parts and to achieve reasonable success in the whole range of life adjustments, including the normal sport activities of the usual physical education program.[10]

IV. LIMITATIONS

The study was limited to twelve selected public secondary schools

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[9]Ibid., p. 3.

[10]George T. Stafford, Sports for the Handicapped (New York: Prentice-Hall, Inc., 1947), p. 2.

in Northeastern and Central Kentucky who were affiliated with the Morehead State University Student Teaching Program in the 1967-68 school year. These schools were chosen because they were representative of the districts that surrounded, and were adjacent to, the Morehead State University service area.

The validity of the data for this study was highly reliant upon a questionnaire that was used to elicit the responses of principals of the high schools in the selected service area. This research was operative under certain limitations which were imposed by the narrow variety of handicapping conditions. Only those physically handicapping conditions that were found by writers in the field of special physical education, to be the most frequently occurring in today's regular public schools were used.[11]

This research did not concern itself with the mentally retarded student. The line of demarcation for those students incorporated into the study was an IQ of seventy minimum. McCandless reiterated that, "We have already defined the group of simple mental defectives as neurologically and physically normal children testing below about seventy IQ on standard intelligence tests."[12] In the case of a student that had an IQ of sixty-nine or below, and additionally had a physically

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[11]Maryhelen Vannier and Hollis Fait, Teaching Physical Education in Secondary Schools (Philadelphia: W. B. Saunders Company, 1964), p. 346; Fait, op. cit., pp. 50-132; Harrison H. Clarke and David H. Clarke, Developmental and Adapted Physical Education (Englewood, New Jersey: Prentice-Hall, Inc., 1963), pp. 217-321.

[12]Boyd R. McCandless, Children Behavior and Development (New York: Holt, Rinehart and Winston, Inc., 1967), p. 356.

handicapping condition, the individual was omitted from the study.

This study did not include the psychological characteristics that may be associated with a handicapped student. Only those students with physically handicapping conditions that existed for at least three months in duration were included. Neither was an evaluation of the practicality of the recommended special physical education activities included. This study was limited in scope because it was not possible to know whether the physical education teacher could, in fact, administer an adequate program of special physical education.

V. ASSUMPTIONS

This study proceeded under the following basic assumptions:

1. There is a need in secondary schools for the type of physical education program that has as its chief purpose corrective and adapted outcomes.
2. There are certain activities in the field of physical education that are regarded as being adapted and corrective in their nature.
3. An appropriate set of recommendations of adapted and corrective activities can be developed for the physically handicapped students in the Morehead State University service area.
4. The high school principals that were selected to furnish information vital to the success of the study gave accurate and unbiased responses.

VI. ANALYSIS OF THE PROBLEM

The problem of the study was analyzed to produce three questions, the answers to which comprise the findings of the study:

1. What is the nature and frequency of the handicapping conditions that beset secondary school students in the Morehead State University service area?
2. Is there a need for recommended special physical education activities in these schools?
3. What is an appropriate set of recommendations of special physical education activities for those schools, if any, in which the need for such recommendations has been found to exist?

CHAPTER II

REVIEW OF LITERATURE

This chapter is organized into two sections, each concerned with reviewing relevant literature in the field of special physical education. The first section of this chapter is concerned with studies and articles dealing with various aspects of special physical education. The second section of this chapter deals with a review of literature concerned with the nature of physical handicaps.

I. REVIEW OF RESEARCH STUDIES AND ARTICLES

The initial section of this chapter deals with five general aspects of special physical education: the way in which the physically handicapped aspires to be treated; current status of special physical education; physical activity for the visually handicapped; physical education interests for the orthopedically handicapped and; community care for the handicapped.

A considerable number of studies have been done on various aspects of special physical education. These studies have a direct relationship to the study of the establishing of recommendations for special physical education activities in Northeastern and Central Kentucky.

Many educators have expressed differing opinions as to the way in which the physically handicapped individual aspires to be treated. LaChappelle, in his study of seventy handicapped college students and alumni at the University of Illinois, expressed this fact when he wrote

that the same disability has a different meaning to almost every human being. He wrote that, "The most difficult adjustment problem of the physically handicapped are to accept help from others, to accept their disability, to accept the change in body appearance and to try to find new goals."[1]

Ross gave further insight into the implications of the physically handicapped individual in the following passage: "I don't want to be treated like a cripple."[2] She is afflicted with multiple sclerosis and is resigned to a wheelchair. Ross expressed her desires to be treated with true equality. She does not want to be pitied but treated with, ". . . the same courtesy and good manners accorded any other individual."[3] Ross expressed the opinion that if a handicapped person liked you before their injury, they will still like you--if you remain as you were.

Christaldi, in her article dealing with participation in a physical education program for the handicapped, wrote that, ". . . children with all degrees of physical disabilities crave physical activity."[4] She maintained that the school has the responsibility to provide this

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[1]James Albert LaChappelle, "A Survey of the Problems of Adjustment of the Physically Handicapped" (unpublished Masters thesis, The University of Illinois, Urbana, 1960), p. 64.

[2]Gertrude Ross, "How to Treat The Handicapped," Good Housekeeping, 162:242, April, 1966.

[3]Ibid.

[4]Josephine Christaldi, "Every Child is Entitled to Participate in a Physical Education Program," Illustrated Grade Teacher, 82:1268, February, 1965.

need for all children. Christaldi wrote that, ". . . children with physical limitations have all the desires and ambitions of the physically normal child."[5]

Four studies were found that deals with physical activity for the visually handicapped. Williams wrote that physical activity is for every student. He maintained that planned physical activity can make a particularly important contribution to the development of the visually handicapped student if he is given the opportunity to participate. He wrote that, ". . . physical activity has great value, and no stone should be left unturned to the greatest benefit of the visually handicapped student."[6]

Fingeret stated that visually handicaps are increasing four-fold and the need is great to provide readable books for these people. She recommended the following to help motivate the reader with changing vision: larger than average print books; optical aids; recorded books; and braille.[7]

Prince wrote that, "visual handicaps" is an oversimplification of the term for many unfortunate conditions, most of which have only one thing in common--difficulty in seeing without, or even with, the aid of

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[5]Ibid.

[6]F. Neil Williams, "Physical Education Adapts to the Visually Handicapped," Journal of Health, Physical Education, and Recreation, 35:25-26, March, 1964.

[7]Rose W. Fingeret, "Aids For The Reader With Changing Vision," AIA Bulletin, 58:792-794, October, 1964.

special devices other than conventional spectacles. Different forms of visual handicaps may require different remedies, but one form of help additionally acceptable to all is the maximum legibility of print. She cited seven factors that must be considered in preparing books for the visually handicapped reader: type size; type style and proportions; interletter spacing; interword spacing; interline spacing; line width; and contrast of the type with the paper.[8]

Khouri selected twelve volunteer subjects--four totally blind and eight partially sighted--to determine whether the visually handicapped person could find enjoyment and success in target archery and to determine what adaptations in archery techniques were necessary. The visually handicapped students, according to this study, derived enjoyment and benefit from archery.[9]

A question that has arisen in the field of special physical education is what physical education interests do the orthopedically handicapped students have; if any? Spragens made case studies of orthopedically handicapped children in Casis Elementary School, Austin, Texas. The physical education interests were necessarily limited to some extent; but the limitations were often magnified by lack of proper instruction, insufficient opportunity to play with their fellows, or lack of a recreation program in which they were welcome and had some

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[8]Gladys T. Piez, "Library Technology," (Report of Prince study), AIA Bulletin, 58:324-325, April, 1964.

[9]Lorraine M. Khouri, "Archery for the Handicapped," Completed Research in Health, Physical Education, and Recreation, 7:83, 1965.

appropriate function. A group program was advocated along with workshops for teachers, parents, and recreation leaders. It appears that, according to Spragens' study, the orthopedically handicapped students do have a wide vareity of physical education interests.[10]

Five studies were found that deals with the current status of adapted and corrective physical education. Weston in his study of the current status of corrective physical education and athletic training in reference to frequency of program, disposition of physically atypical students, facilities and equipment, availability and nature of instruction, and interest, if any, in these areas found that facilities and equipment are lacking for these programs; public education and physical education are not fulfilling the precepts present in virtually all texts of education while failing to include all physically atypical students.[11]

Clein took a survey by the questionnaire technique of the adapted physical education programs in all land-grant colleges and universities in the United States. He found that forty-two percent of the land-grant schools have physical education programs which do not provide adapted physical education opportunities for these students who are unable to participate in the regular activities. Clein briefly summarized the data obtained from these land-grant institutions. He found that:

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[10]Jane E. Spragens, "A Study of the Physical Education Needs and Interests of a selected Group of Orthopedically Handicapped Children with Recommendations for Planning and Conducting Physical Activities," Completed Research in Health, Physical Education, and Recreation, 7:101-102, 1965.

[11]Brodie C. Weston, "The Current Status of Corrective Physical Education and Athletic Training in the Public Schools of Illinois" (unpublished Masters thesis, The University of Illinois, Urbana, 1960), p. 59.

1. The adapted program had no separate written statement of policy, apart from the policy for the general physical education program in fifty-two percent of these institutions.
2. The adapted program was administered by the same individual who was responsible for the administration of the general program in sixty-six percent of the cases.
3. The classification of students for the adapted program was accomplished by a Student Health Center examination in every case.
4. Adapted physical education was a required substitute for those students unable to participate in the general program in eighty-five percent of the cases.
5. The requirements for adapted physical education with respect to credits and passing grades were the same as those for the general program in sixty-five percent of these institutions.
6. The Student Health Center played an integral part in the operation of the adapted program in eighty-three percent of these institutions.
7. Individually prescribed adapted programs were either prepared or approved by a physician in sixty-one percent of these institutions.[12]

Davion determined the number of physically handicapped students, their means of meeting the physical education requirements, and the basis upon which physical education opportunities were offered to them. He determined the above by a proportional sampling of one-hundred-sixty-four of the state's five-hundred-thirty schools by means of a closed form questionnaire. Approximately fifty percent of the schools met the physical education requirements for handicapped students by modification in the regular physical education class. About forty percent substituted activities such as office duties, odd jobs, and observation of the regular physical education class. Only ten percent of the schools provided

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[12]Marvin I. Clein, "Adapted Physical Education Programs at Land-Grant Institutions," Journal of Health, Physical Education, and Recreation, 37:57-59, February, 1966.

special classes.[13]

Neeley maintained that the physical education period is a very important part of the day for the educable mentally retarded child. This article was written specifically for teachers in the field of Special Education. She wrote that physical education teachers should, "Try to combine the special physical education class with a regular class on certain occasions."[14] Neeley stated that the physical education teacher should explain the program to the parents, and vary the physical education program as much as possible.

Condon sent a brief questionnaire to one-hundred students and graduates, asking them to list the extracurricular activities in which they were engaged. Condon's survey showed that:

> . . . regardless of the type of physical impairment, the students in this study engaged in the general activities of the college, thereby developing their social as well as their intellectual life.[15]

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[13]Violet M. Davion, "Physical Education Opportunities for the Physically Handicapped Pupils in the Public Senior High Schools of Louisiana," AIA Bulletin, 58:795, October, 1964.

[14]Gwendolyn Neeley, "In Slow Gear: the Physical Education Period," Instruction, 74:39, November, 1964.

[15]Margaret E. Condon, "Extracurricular Activities of Physically Handicapped Students," Personnel and Guidance Journal, 37:53-54, September, 1958.

II. REVIEW OF LITERATURE ON PHYSICAL HANDICAPS

This study consists of reviewing relevant literature in regard to the physically handicapping conditions that are the most frequently occurring in today's schools. The author reviewed each handicap in three dimensions: the definition, characteristics, and recommended special physical education activities for all of the handicapping conditions with which this study is concerned.

Anemia

Anemia is described by Christian as:

> . . . a reduction of the amount of blood as a whole, of its corpuscles or of certain of its constituents, may be due to failure in the manufacture, to increase in consumption or to a loss, sudden or gradual, as a hemorrhage. Anemia may be local in certain parts or general.[16]

Daniels and Davies wrote that, "Anemia is characterized by abnormality of the red cell part of the blood wherein either the number or nature of the cells are not normal for various reasons."[17] Pallor is a common sign of anemia. Weakness, dizziness, shortness of breath, nervousness, and lack of strength and endurance are symptoms commonly associated with anemia.[18]

It appears, according to Daniels and Davies, that because of the

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[16]Henry A. Christian, The Principles and Practices of Medicine, 16th ed. (New York: Appleton-Century-Crofts, 1947), p. 938.

[17]Arthur S. Daniels and Evelyn A. Davies, Adapted Physical Education (New York: Harper and Row Publishers, 1965), p. 285.

[18]Ibid., p. 286.

lack of strength and endurance, the anemic student will often show little desire to participate in many of the activities common to his age group. Consequently, his interests are curbed, which may lead toward withdrawal. Reduced total activity will limit the range and quality of experiences and adversely affect general educational progress. The case and type of anemia indicate the treatment. During the time period when the condition is present, the student will necessarily have to limit his activities.[19]

Daniels and Davies wrote that the physician will make the decision as to whether the anemic student should participate in physical education activities. When the student does engage in physical education activities, those having good social development potentials and that require little output of energy should predominate. Care should be taken to protect the student from overdoing or being placed in embarrassing situations because of his limitations.[20]

Daniels and Davies have found the following activities to be the most beneficial to a high school student afflicted with anemia:

1. Mild developmental exercises
2. Rhythms
3. Skill elements of standard team games
4. Less active games and sports:
   a. shuffleboard
   b. table tennis
   c. golf fundamentals
   d. archery
   e. bait and fly casting
   f. bowling
   g. horseshoe pitching[21]

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[19] Ibid.

[20] Ibid., p. 287.

[21] Ibid.

Club Foot

Daniels and Davies wrote that club foot, or talipes, is found in a variety of types. The deformity may involve one or both feet and cause the child to walk in one of the following ways:

1. On the toes with heels elevated
2. On the heels with toes elevated
3. On the inside of the feet with the feet turned outward
4. On the outside of the feet with feet inverted and adducted[22]

According to Clarke and Clarke, the treatment for club foot is most successful when it is begun early, preferably at birth. However, the high school student suffering from this handicap presents the teacher of special physical education with further opportunities for service.[23]

Daniels and Davies insisted that adjustment problems can be made. They state, quite pointedly, "The fact of disability must be accepted, all possible medical resources utilized, and functional training in all areas of living used wherever needed."[24]

In the case of a student afflicted with club foot, the individualized program must be predicted upon the recommendations of the physician. Because of unusual appearance or limited function, the physical educator should use all possible means to raise the pupil's self-esteem. The broader the students social experience, as his situation permits, the

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[22]Ibid., p. 293.

[23]Harrison H. Clarke and David H. Clarke, Developmental and Adapted Physical Education (New Jersey: Prentice-Hall, Inc., 1963), p. 225.

[24]Daniels and Davies, op. cit., p. 294.

better the program. The program should be designed to increase strength, endurance, and total function. Consequently, the student should be encouraged to participate in as many activities as possible. Additional outcomes should be the development of general coordination and specific skills.[25]

The content of the program should be determined by the level of pupil development, as well as individual need. Daniels and Davies stated:

> Specific and general developmental exercises, functional training, rhythmical activities, social active games, sports, aquatics, and out-of-doors recreation should probably all be included at one time or another, . . .[26]

Amputations

An amputee is classified as one with a congenital or acquired loss of an extremity or portion thereof. Stafford wrote that an amputation is, ". . . the removal of a part of the body, commonly the removal of the whole or part of an extremity."[27] The physical educator must, according to Clarke and Clarke, be aware of the emotional implications that are present in the case of a student afflicted with an amputation. Clarke and Clarke wrote that, "The loss of a limb involves an irrevocable

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[25]Ibid., p. 295.

[26]Ibid.

[27]George Stafford, Exercise During Convalescence (New York: A. S. Barnes, 1947), p. 86.

anatomical and physiological impairment of major proportions."[28]

Because sports are dominant on the high school level, the amputee student will find many activities which he can participate in successfully. The physical educator should carefully select those activities which will be of benefit to the amputee student, keeping the need for individual instruction uppermost in his mind.[29] Davies and Daniels emphasized that, "Participation in sports activities can play an important role in the rehabilitation and education of the amputee student."[30] By participating in a varied program of sports activities, there is improvement in speed, strength, endurance, balance, and agility.[31]

The physical educator must explain to the amputee student that a great deal of practice is necessary to achieve skill in a sport. The special physical education program should afford the amputee student an opportunity to engage in a wide variety of activities.[32] The following listings are suggested as illustrative of the kind of activities appropriate for different types of amputees:

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[28]Clarke and Clarke, op. cit., p. 242.

[29]Arthur S. Daniels and Evelyn A. Davies, Adapted Physical Education (New York: Harper and Row Publishers, 1965), p. 159.

[30]Ibid.

[31]Ibid.

[32]Ibid., p. 160.

Single-arm amputee

Athletic games

1. Badminton
2. Baseball
3. Basketball
4. Bowling
5. Club snatch
6. Croquet
7. Dodge ball
8. Football
9. Golf
10. Long ball
11. Kick baseball
12. Shuffleboard
13. Soccer
14. Speedball
15. Volleyball
16. Tennis
17. Table tennis
18. Score spot tag[33]

Combative sports

1. Fencing
2. Hand wrestle
3. Hat sparring
4. Rooster fight[34]

Dances. All forms of dancing which are offered to normal students. Special emphasis should be placed on social dancing.[35]

Individual athletics and stunts

1. All track and field events except the pole vault
2. Backward roll
3. Basketball and baseball throws for distance and accuracy
4. Forward roll
5. Football passing and kicking for distance and accuracy
6. One-arm medicine-ball throw
7. Fundamental sport skills
8. Potato race
9. Sit-up
10. Sky-jump
11. Snap-up

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[33]George Stafford, Sports for the Handicapped (New York: Prentice-Hall, Inc., 1947), p. 135.

[34]The Physical Education Students Handbook No. 6 (New York: New York University Publication, 1934), p. 97.

[35]Stafford, loc. cit.

12. Three pegs
13. Tennis and volleyball services
14. Pirouette[36]

Relays

1. All track relays
2. All swimming relays (class competition only)
3. All skating relays
4. Centipede
5. Leap frog
6. Skin the snake relay (amputee acts as the team)[37]

Aquatic sports

1. All diving events
2. All strokes
3. All water games
4. Sailing
5. Ordinary water stunts[38]

Miscellaneous sports

1. Bait and fly casting
2. Bicycling
3. Camping
4. Climbing
5. Curling
6. Fishing
7. Hiking
8. Horseback riding
9. Pistol shooting
10. Roller skating
11. Rope spinning
12. Skating (plain figure and straight)
13. Skiing
14. Tobogganing
15. Weight lifting[39]

Additionally, many activities have been found to be beneficial to amputee students who are classified as leg-amputees:

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[36]S. C. Staley, Individual and Mass Athletics (New York: A. S. Barnes, 1925), p. 101.

[37]Ibid., p. 136.

[38]Ibid.

[39]Ibid.

Leg-amputee

Relays

1. Non-running relays
   a. catch-throw-and-sit
   b. crab walk relays
   c. dumb-bell pushing
2. Passing relays
   a. overhead pass
   b. zigzag ball-passing relay[40]

Athletic games

1. Bombardment
2. Bowling
3. Channel ball
4. Circle ball
5. Croquet
6. Duck on the rock
7. Horseshoe pitching
8. Newcomb
9. Shuffleboard
10. Table tennis
11. Tether ball[41]

Combative sports

1. Cock fight
2. Dog fight
3. Foot push
4. Fowl fencing
5. Going down
6. Indian wrestle
7. One-sided wrestle
8. Stick stand[42]

Dances. Many students with only one leg are able to dance, and do dance. Special emphasis should be placed on social dancing.[43]

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[40]B. Mason and E. Mitchell, Active Games and Contests (New York: A. S. Barnes, 1935), p. 208.

[41]Staley, op. cit., p. 202.

[42]M. Rodgers, A Handbook of Stunts (New York: The MacMillan Company, 1933), p. 107.

[43]George Stafford, Sports for the Handicapped (New York: Prentice-Hall, Inc., 1947), p. 137.

Aquatic sports. All forms of aquatic sports which are offered to the normal student with the possible exception of running dives.[44]

Individual athletics and stunts

1. Chinning
2. Crab bend
3. Elbow stand
4. Forearm stand
5. Forward and backward rolls
6. Head and hand stands
7. One-leg squat
8. Pirouette
9. Push-ups (floor-dips)
10. Rope climb
11. Seal flap
12. Sit-ups
13. Service in volleyball and tennis
14. Three pegs
15. Tip-up
16. All stunts on horizontal bar, rings, parallel bars, and side horse[45]

Miscellaneous sports

1. Archery
2. Bait and fly casting
3. Bag punching
4. Basket shooting
5. Bicycle riding
6. Blow gun shooting
7. Fishing (still)
8. Juggling
9. Riding
10. Rifle shooting
11. Rope spinning[46]

Polio

Poliomyelitis, as described by Daniels and Davies is, ". . . an acute infectious disease caused by a filterable virus. The voluntary muscles innervated by the motor cells involved become paralyzed when the impulses to them are cut off."[47]

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[44]Ibid., p. 138.

[45]Ibid., p. 137.

[46]Ibid., p. 138.

[47]Arthur S. Daniels and Evelyn A. Davies, Adapted Physical Education (New York: Harper and Row Publishers, 1965), p. 294.

Daniels and Davies wrote that, following an attack of polio, the physical educator should not attempt to include the student in the program until he receives specific medical approval from a physician.[48] Daniels and Davies maintained that:

> . . . general strength, coordination, and endurance can be built up so that the student can meet the physical demands of daily living and, within the limits imposed by the disability, increase his ability to live a normal life. It is of vital importance for the physical educator to aid in the students sense of worth, his self-esteem, and his independence.[49]

According to Daniels and Davies, the student should participate in the widest range of activities.[50] The following categories will provide a sufficient range to meet most of the physical education needs of the student.

Functional training are types of activities which are common to all people in daily living and may be taught to the students. Daniels and Davies wrote that:

> . . . oft-repeated movements, such as walking (properly), opening doors, using stairs, handling outer clothing, carrying objects, and changing body positions from lying to sitting to standing, if done in the easiest possible manner, can do much to offset fatigue, increase the sense of well-being and independence, and increase physical efficiency.[51]

All of the many forms of dancing that are suitable to the high

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[48] Ibid., pp. 253-254.

[49] Ibid., p. 251.

[50] Ibid., p. 252.

[51] Ibid., pp. 253-254.

school age level should be included in the program. The use of rhythms have many values and contributions for a student afflicted with polio, and are listed as follows:

1. A form of mild exercise
2. Help the development of rhythm, timing, and coordination
3. A source of pleasure
4. Contribution to poise and social development
5. Carry-over value in the form of adult recreation[52]

Water activities are of special value to these students. Aquatics are a very good form of developmental activity. These students learn the rudiments of safety and recreational skills.[53]

On the secondary school level, in addition to exercises (prescribed by a physician) functional activities, dancing, and aquatics, and many other varied activities should be offered. Among these are a broad experience in selected, less vigorous games:

1. Shuffleboard
2. Table tennis
3. Archery
4. Golf
5. Bowling
6. Bait and fly casting[54]

Additionally, more active individual, dual, and team games have definite benefits to these pupils:

1. Badminton
2. Basketball
3. Tennis
4. Volleyball

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[52]Ibid., p. 254.

[53]Ibid.

[54]Ibid.

5. Selected track events
6. Tumbling stunts
7. Gymnastic stunts[55]

According to Daniels and Davies, in the planning of a program of special physical education, the age of the pupil, his degree of involment, specific muscle group affected, and general condition must all be taken into consideration. Daniels and Davies wrote that, "Medical guidance should be sought in the initial planning and for each new phase of the program."[56]

Daniels and Davies maintained that the physical educator should encourage participation in specific outdoor recreational activities such as camping, hiking, cycling, boating, canoeing, skating, and fishing.[57]

Cardiopathic Conditions

A cardiopathic condition refers to a deviation in the function of the heart. ("Cardiopathy--any disorder or disease of the heart.")[58]

Daniels and Davies insisted that there is much fear when an abnormality of the heart is diagnosed. The physical educator cannot expect to be in a position to know a great deal about the heart.

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[55]Ibid.

[56]Ibid.

[57]Ibid., p. 255.

[58]Dorlands Illustrated Medical Dictionary, 24th ed. (Philadelphia: W. B. Saunders Company, 1965), p. 254.

Consequently, any activity should have the permission of a qualified physician. Teachers of special physical education need to know the amount of activity a pupil can safely tolerate. This is, of course, determined by the physician after careful examination.[59]

Fait emphasized that:

> The important danger signals of heart disease are related to the failure of the heart to perform properly. The following symtoms may indicate heart disease: pain in the chest; shortness of breath; edema (swelling) in the feet, ankles, or abdomen; dizziness; fatigue; indigestion; and double vision.[60]

In dealing with the cardiopathic student, some safe general rules regarding activity is in order. Robinson suggests:

1. No child with a heart condition should ever enter competitive sport.
2. Walking on the level is usually safe in moderate weather.
3. All except the most severe cardiacs will benefit from postural exercises graded according to their physical ability to do them.
4. Any exertion should stop at the onset of shortness of breath, cardiac distress, or fatigue greater than experienced by a normal child on similar exertion.[61]

It is advisable, according to Fait, when working with cardiac students in special physical education, to plan their work for short activity periods.[62]

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[59]Daniels and Davies, loc. cit.

[60]Hollis F. Fait, Special Physical Education: adapted, corrective, developmental (Philadelphia: W. B. Saunders Company, 1966), p. 102.

[61]H. C. Robinson, "Physical Education of Cardiacs," Journal of Health and Physical Education, 289-334, May, 1938.

[62]Fait, op. cit., p. 105.

Fait maintained that in dealing with the high school student, the physical educator should realize that this pupil is alert to the fact that he has a disability. However, in order to gain peer acceptance, this pupil will try to do too much. Each student will have his individual program of special physical education designed to fit his limitations and capacities.[63]

Vannier and Fait, leading writers in the field of special physical education, have divided the cardiopathic conditions into four classes. Additionally, Vannier and Fait have listed specific recommended activities that will be beneficial to these students:

> Class I. Those who do not experience undue fatigue or discomfort from ordinary activity. Most activities may be offered unless the participation will be highly competitive. Suggestions include:
>
> 1. Softball
> 2. Paddleball
> 3. Tumbling
> 4. Swimming
> 5. Tether ball
> 6. Badminton doubles
> 7. Handball doubles
> 8. Modified tennis
>
> Class II. Those for whom ordinary physical activity results in fatigue and pain. Activities suggested for moderate participation by this group are:
>
> 1. Archery
> 2. Bowling
> 3. Croquet
> 4. Horseshoes
> 5. Shuffleboard
> 6. Fly and bait casting and spinning
> 7. Hiking
> 8. Bag punching
> 9. Interpretive dance

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[63] Ibid.

Class III. Those who experience fatigue and pain in less than ordinary physical activity. Mild activities for those in this group include:

1. Walking
2. Fly and bait casting and spinning
3. Shuffleboard
4. Rifle shooting

Class IV. Those who are unable to do any physical activity without discomfort. Bed rest during the physical education period may be prescribed by the doctor for a student in this class.[64]

Vannier and Fait insisted that when working with students who have heart conditions, the teacher should exercise cautious leadership, be guided always by a physicians advice, and be ever watchful for early signs of fatigue.[65]

Cerebral Palsy

Daniels and Davies wrote that:

> Cerebral Palsy is a condition characterized primarily by the inability to control muscular movements due to either damage or faulty development of the motor controls of the brain.[66]

Perlstein wrote that:

> . . . cerebral palsy, by definition, is a condition characterized by paralysis, weakness, uncoordination, or any other aberation of

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[64]Maryhelen Vannier and Hollis F. Fait, Teaching Physical Education in Secondary Schools (Philadelphia: W. B. Saunders Company, 1964), pp. 350-351.

[65]Ibid.

[66]Arthur S. Daniels and Evelyn A. Davies, Adapted Physical Education (New York: Harper and Row Publishers, 1965), p. 187.

motor function due to pathology in the motor control centers of the brain.[67]

Vannier and Fait maintained that:

> The main task the teacher faces in working with the cerebral palsied student is to accept him, understand his condition, become aware of his educational capacities for work, play and study, assist him to gain confidence, skills, social acceptance and/or group status, and guide him toward needed personal and financial independence.[68]

Vannier and Fait insisted that an appropriate program of special physical education for the cerebral palsy student should stress the following:

1. Methods of relaxation
2. Antagonistic muscles developed
3. Accuracy of movement
4. Body control
5. Strength and endurance developed
6. Skill in recreational games and sports
7. Non-competitive activities[69]

Recommended activities for the cerebral palsy students, as expressed by Vannier and Fait, are:

1. Swimming
2. Social, square, folk, and tap dancing
3. Horseshoes
4. Games of low organization
5. Shuffleboard
6. Lead-up games to sports
7. Bowling
8. Archery
9. Golf

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[67]Meyer Perlstein, "Medical Aspects of Cerebral Palsy," American Journal of Occupational Therapy, March-April, 1950, p. 47.

[68]Maryhelen Vannier and Hollis F. Fait, Teaching Physical Education in Secondary Schools (Philadelphia: W. B. Saunders Company, 1964), p. 352.

[69]Ibid.

10. Fly and bait casting
11. Table tennis
12. Campcraft activities including fishing
13. Games requiring movement accuracy such as hitting or kicking stationary objects[70]

Orthopedic Disabilities (crippled)

Vannier and Fait have defined an orthopedic handicap as, ". . . one which will not allow the patient to perform properly the motor and locomotor functions of his body and limbs."[71] This divergent meaning may, of course, be concerned with the functions of the bones, joints, tendons, and nerves. The scope of this study necessitated a limitation to the three most prominent orthopedic disabilities; and they are listed as follows:

1. Students confined to wheelchairs
2. Pupils wearing leg braces or using crutches
3. Students having arm paralysis[72]

According to Vannier and Fait, the program of special physical education should be in consultation with the family physician. Simple skills should be mastered first. Also, a wide variety of skills should be introduced. The initial phase of the program of special physical education for the orthopedic handicapped pupil will be largely exercises and games. A primary objective will be to increase physical fitness and

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[70] Ibid.

[71] Ibid., p. 354.

[72] Ibid.

body mechanics.[73]

Suitable adaptations should be made so that the restrictions imposed by the handicap are minimized. Two outstanding writers in the field of special physical education have devised activities which are both suitable and of benefit to the orthopedic handicapped individual. By engaging in these activities, recommended and advised by a physician, the handicapped student will grow physically, emotionally, and socially. The activities which have been found to be the most beneficial for these students will be listed below:

Students confined to wheelchairs

1. Table and card games
2. Archery
3. Swimming
4. Bowling
5. Wheelchair hockey, volleyball, and basketball
6. Modified gymnastics
7. Rope climbing
8. Paper and pencil games
9. Wheelchair square dancing
10. Water games
11. Constructive games such as making puzzles
12. Fly and bait casting
13. Box hockey
14. Table tennis
15. Boating[74]

Pupils wearing leg braces or crutches

1. Archery
2. Shuffleboard
3. Camping and outing
4. Fly and bait casting
5. Tether ball
6. Target shooting
7. Horseshoes
8. Modified softball
9. Rope climbing
10. Modified gymnastics[75]

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[73]Hollis F. Fait, Special Physical Education: adapted, corrective, developmental (Philadelphia: W. B. Saunders Company, 1966), pp. 91-92.

[74]Vannier and Fait, op. cit., pp. 354-355.

[75]Ibid.

Students having arm paralysis

1. Social, tap, folk, and square dance
2. Camping and outing
3. Rope jumping
4. Cycling
5. Swimming
6. Modified stunts
7. Ice and roller skating
8. Hiking
9. Modified soccer
10. Selected track and field events
11. All racquet games
12. Softball
13. Volleyball[76]

From the above listings, it would appear that a student having arm paralysis should be able to participate in most activities as soon as he has learned to perform skills with one hand which are normally performed with two.[77]

The physical educator, after consulting with the family physician, may modify many activities to meet the needs of these students. This modification may be illustrated by the boy who is in a wheelchair batting a softball, while a classmate runs the bases for him.

Visual Limitations

In classifying those individuals with visual limitations, the initial phase is to determine how greatly their vision deviates from the normal. Vannier and Fait wrote that, ". . . partially sighted students . . . their vision is between 20/70 and 20/200."[78] Consequently, for

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[76]Ibid.

[77]Fait, op. cit., p. 95.

[78]Vannier and Fait, loc. cit.

the purpose of this study, the line of demarcation for those students classified as "partially sighted" will be a minimum of 20/200. This means that these people can see at 20 feet what a normal person can see at 200 feet.

Because of the very nature of this handicap, the physical education instructor must make the necessary safety adjustments in the gymnasium. Daniels and Davies insisted that:

> Sports and games offer an activity outlet for the visually handicapped. Sports, games, and general play may provide the satisfactions and success experiences that in turn can lead to a wider range of activity and social contacts.[79]

In developing those activities that will be beneficial to these students, Daniels and Davies emphasized the fact that the physical educator should consult with a qualified physician. According to these writers, the actual program should be as broad as possible, but within student limitations. Many with impaired vision lack social and physical skills. Consequently, the more that these students are encouraged to participate in activities with normal groups, the better their carry-over value will be.[80]

Listed below are a set of suggested activities that authors have found to be beneficial to partially-sighted students:

1. Roller skating to music
2. Archery
3. Golf
4. Track and field

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[79]Arthur S. Daniels and Evelyn A. Davies, Adapted Physical Education (New York: Harper and Row Publishers, 1965), p. 267.

[80]Ibid., pp. 268-269.

5. Bowling
6. Modified stunts and tumbling
7. Basketball goal shooting
8. Wrestling
9. Fishing
10. Social, folk, square, and modern dancing
11. Light exercise to music
12. Marching
13. Body building
14. Boating
15. Swimming[81]
16. Games and relays[82]
17. Outdoor recreational activities:
    a. camping
    b. hiking
    c. boating
    d. sailing[83]

Auditory Limitations

Daniels and Davies maintained that there is no sharp dividing line between the deaf and the hard of hearing. According to these two writers, total agreement on the classification of these two groups has never been established.[84] For purposes of clarity in this study, a deaf person will be defined as one who lacks the sense of hearing. Hearing loss is measured in terms of decibels. Clarke and Clarke have reported that, "A five or six decibel loss is considered within normal limits."[85] Clarke and Clarke have classified auditory impairments in three dimensions:

1. A 20-35 decibel loss in the better ear will be considered

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[81]Vannier and Fait, op. cit., p. 356.

[82]Daniels and Davies, op. cit., p. 270.

[83]Ibid.

[84]Ibid., p. 275.

[85]Harrison H. Clarke and David H. Clarke, Developmental and Adapted Physical Education (New Jersey: Prentice-Hall, Inc., 1963), p. 315.

mild (speech acquired normally)
2. A loss of hearing of 35-60 decibels will be considered a moderate deficiency (These children can hear only extremely loud speech without amplification)
3. Hearing loss above 60 decibels will be considered severe (These children will require special training; e.g. hearing aid, lip reading, and speech reading)[86]

The prime consideration that the physical educator must realize is that these acoustically handicapped pupils will be deprived of the warnings that exist in sound. Daniels and Davies emphasized that whenever possible, these students should have a "hearing-partner", and the physical educator should make an effort to instruct the class so that he is facing these students whenever possible.[87]

Daniels and Davies wrote that, "Deaf and hard of hearing children as such do not need a special type of physical education program."[88] Stafford maintained that, "Practically all the athletic games usually offered to the normal individual can be played by those with hearing impairments."[89]

The following activities have been successfully used for individuals who are deaf, and for these with impaired hearing:

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[86]Ibid.

[87]Daniels and Davies, op. cit., p. 279.

[88]Ibid., p. 281.

[89]George Stafford, Sports for the Handicapped (New York: Prentice-Hall, Inc., 1947), p. 180.

Athletic games

1. Archery
2. Badminton
3. Baseball (soft)
4. Basketball
5. Bowling
6. Football
7. Games of low organization (same as for normal)
8. Handball
9. Horseshoe pitching
10. Semiorganized games (same as for normal)
11. Shuffleboard
12. Six-man football
13. Soccer
14. Tennis (all forms, including deck tennis)
15. Touch football
16. Volleyball

Combative sports

1. Fencing
2. Hand push
3. Hand wrestle
4. Wrestling

Dances. All types which are usually offered to the normal individual. Folk dances and rhythms are helpful in developing better body control and self-confidence before social dancing is introduced.

Individual athletics and stunts

1. All track events which are usually offered to the normal student
2. All tumbling (simple) stunts with special emphasis on balance activities, such as handstands
3. Apparatus stunts
4. Self-testing stunts:
   a. kicking for distance and accuracy
   b. pull-ups (chinning)
   c. push-ups
   d. rope climb
   e. rope skipping
   f. running
   g. sit-ups
   h. throwing for distance and accuracy

Relays. All types of relays which are usually offered to normal students.

Aquatic sports

1. Boating
2. Canoeing
3. Endurance swimming (done leisurely in good form)
4. Light water games
5. Sailing
6. Simple swimming and water stunts
7. Water safety

Miscellaneous sports

1. Bait and fly casting
2. Bag punching
3. Bicycling
4. Camping
5. Fishing
6. Hiking
7. Juggling
8. Rope spinning
9. Scouting
10. Skating (all forms)[90]

Logically, then, it would appear that in order to help insure that the handicapped student will experience the joy of successful participation, each skill must be reduced to its simplest form. Thus, the acoustically handicapped individual will be skilled enough so that he can realize the many satisfactions of competing on an equal basis with his normal peer group.

Diabetes

Daniels and Davies wrote that, "Diabetes is a disease of metabolism characterized by the inability of the body to use properly starches and sugars taken in as food."[91] According to Daniels and Davies,

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[90]Ibid., pp. 180-182.

[91]Arthur S. Daniels and Evelyn A. Davies, Adapted Physical Education (New York: Harper and Row Publishers, 1965), p. 290.

"Symptoms of the disease are thirst, hunger, fatigue, loss of weight, frequent urination, large amounts of urine, and infections that are slow to heal."[92]

Clarke and Clarke insisted that the exercise given to the student with diabetes should be prescribed by the physician. The physical educator should begin exercises rather slowly. According to Clarke and Clarke, these activities should be engaged in for only short periods.[93]

Fait emphasized that children afflicted with diabetes should be encouraged to engage in normal play activities without restriction.[94] Fait maintained that, "As a general rule, diabetics should be guided into types of participation which permit them to stop when necessary to rest for a time."[95] Fait insisted that an additional element that must be met in a special physical education class if the fact that the diabetic is particularly susceptible to infection. Cuts, abrasions, blisters, and fungus infections must be avoided.[96]

Logically, it would appear that regular and moderate exercise should be planned for the student with advice and counsel from the

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[92]Ibid., p. 291.

[93]Harrison H. Clarke and David H. Clarke, Developmental and Adapted Physical Education (New Jersey: Prentice-Hall, Inc., 1963), p. 307.

[94]Hollis F. Fait, Special Physical Education: adapted, corrective, developmental (Philadelphia: W. B. Saunders Company, 1966), p. 137.

[95]Ibid.

[96]Ibid.

physician. Play and games that cause marked fatigue should be avoided. An effort should be made to see that the standards and controls learned in class are followed during out-of-school play activity.

Listed below are recommended activities that have been found successful for persons who have diabetes:

1. Bowling
2. Shuffleboard
3. Swimming
4. Archery[97]
5. Relays [98]

Asthma

Daniels and Davies wrote that, "Bronchial asthma is an allergic condition characterized by recurring attacks of paroxysmal difficulty in breathing."[99] Fait maintained that, "In asthmatic attacks there is a swelling of the mucous membrane lining of the bronchial tubes."[100]

According to Daniels and Davies, the student with asthma should not engage in vigorous and sustained activity of the all-out performance type. The primary reason for this is that the student will be deficient

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[97]Ibid.

[98]Maryhelen Vannier and Hollis F. Fait, Teaching Physical Education in Secondary Schools (Philadelphia: W. B. Saunders Company, 1964), p. 357.

[99]Arthur S. Daniels and Evelyn A. Davies, Adapted Physical Education (New York: Harper and Row Publishers, 1965), p. 288.

[100]Hollis F. Fait, Special Physical Education: adapted, corrective, developmental (Philadelphia: W. B. Saunders Company, 1966), p. 141.

in strength and endurance.[101]

The physician should give tests and attempt to build up the general health of the individual. A neglected case of asthma may become serious. According to Barker, ". . . gout, epilepsy, and psychoneurotic states seem to be common in families in which asthma is prevalent."[102]

Clarke and Clarke wrote that:

> Strengthening and other conditioning activities are indicated for the general fitness of these persons; and, instructions in a wide offering of skills would provide a means of socializing which may be helpful as a form of supporting therapy.[103]

A program of special physical education activities that are designed primarily to raise the level of fitness without causing undue fatigue is greatly needed by these students. Stafford insisted that:

> Moderate and graduated exercise is needed to improve the general health and organic vigor of his body. In addition, he needs the exhilaration which comes from mild forms of adapted sports. Recreative activities which are within his capacity are needed to overcome the focus of his attention on his condition.[104]

The following activities are recommended for individuals with respiratory disturbances:

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[101]Daniels and Davies, op. cit., p. 289.

[102]L. F. Barker, Treatment of the Common Diseases (Philadelphia: L. B. Lippincott Co., 1934), p. 61.

[103]Harrison H. Clarke and David H Clarke, Developmental and Adapted Physical Education (New Jersey: Prentice-Hall, Inc., 1963), p. 320.

[104]George Stafford, Sports for the Handicapped (New York: Prentice-Hall, Inc., 1947), p. 296.

Athletic games

1. Badminton
2. Baseball (soft)
3. Croquet
4. Basketball (short periods of class work)
5. Games of low organization (same as for normal students)
6. Handball (doubles)
7. Horseshoe pitching
8. Newcomb
9. Semi-organized games (same as for normal students)
10. Shuffleboard
11. Soccer (short periods in positions of halfback or fullback)
12. Squash racquets (not more than three games)
13. Tennis (all forms, including table tennis)
14. Touch football (short periods)
15. Volleyball

Combative sports

1. Fencing
2. Hand push
3. Hand wrestle
4. Rooster fight

Dances. All dances which are offered to the normal secondary-school boy.[105]

Dysmenorrhea

Fait wrote that, "Dysmenorrhea, or painful menstruation, occurs most frequently at the beginning of the menstrual cycle."[106] This occurs because the abdominal cavity becomes "stuffed" with an excess amount of blood. Consequently, this increased pressure upon the nerves create pain. Vannier and Fait insisted that, "Because of pain during their menstrual period, girls often ask to be excused from physical

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[105]Ibid., p. 297.

[106]Hollis F. Fait, Special Physical Education: adapted, corrective, developmental (Philadelphia: W. B. Saunders Company, 1966), p. 143.

education."[107] However, in many cases, lack of exercise often results in the condition known as dysmenorrhea. The girls condition may be relieved by engaging in physical education activities which are not strenuous. Vannier and Fait wrote that, "Rather than being excused, these girls should be given light exercises, particularly abdominal exercises, to increase the circulation since this will help to alleviate the pain.[108]

Writers in the field of special physical education have found The Mosher, Billig, and Golub exercises to be the most beneficial because they improve circulation in the abdominal muscle tone, increase lumbopelvic flexibility, and encourage muscular relaxation.[109]

The Mosher exercise is designed to relieve abdominal congestion by "abdominal pumping".[110] The Billig exercise is designed to stretch the fascial ligamentous bonds through which the sensory nerves pass.[111] The Golub exercise stresses systematic twisting and bending of the

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[107]Maryhelen Vannier and Hollis F. Fait, Teaching Physical Education in Secondary Schools (Philadelphia: W. B. Saunders Company, 1964), p. 357.

[108]Ibid.

[109]Eleanor Metheny, Exercise and Menstrual Pain, A symposium on Dysmenorrhea, (Chicago: Phi Delta Pi Fraternity, 1950), pp. 29-32.

[110]C. D. Mosher, "Dysmenorrhea," Journal of American Medical Association, 62:1297, 1914.

[111]H. E. Billig, Jr., "Dysmenorrhea: the Results of Postural Defect," Archives of Surgery, 46:611, 1943.

trunk; activities which were found to be effective in reducing the pain of dysmenorrhea in a study by Golub.[112]

Convalescence from Illness and Injuries (at least 3 months in duration)

Fait suggested that, "Convalescence is a period of recovery from illness."[113] The period of convalescence is characterized by the body's general weakness and low vitality. According to Fait, this stems primarily from the forced inactivity that is often necessitated in extended bedrest. Fait insisted that, "Participation in the adapted exercises and games helps to maintain good circulation and to prevent the deterioration of muscular strength, endurance, and coordination."[114]

Vannier and Fait wrote that:

> Students returning to school after an illness, operation or injury which has kept them bedridden for a considerable length of time may need to be placed in adapted physical education until they regain their normal level of fitness.[115]

Vannier and Fait suggested that before a student participates in a program of special physical education, the student's doctor should be

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[112]Leib J. Golub, "A New Exercise for Dysmenorrhea," American Journal of Obstetrics and Gynecology, 78:152-155, July, 1959.

[113]Hollis F. Fait, Special Physical Education: adapted, corrective, developmental (Philadelphia: W. B. Saunders Company, 1966), p. 111.

[114]Ibid.

[115]Maryhelen Vannier and Hollis F. Fait, Teaching Physical Education in Secondary Schools (Philadelphia: W. B. Saunders Company, 1964), p. 356.

consulted. The physician will approve, and make recommendations, for kinds of activities that will benefit this individual.[116]

In selecting the activities for a convalescing student, Vannier and Fait maintained that any of the activities used to increase physical fitness will be suitable for normal convalescents. When there has been injury to a specific area, a special exercise may be given to strengthen the part and to develop total body fitness.[117]

Obesity (A tolerance scale of 25% of the students weight)

Stafford emphasized that, "If he is as much as twenty-five percent above, he should be classed as obese."[118] According to Page, "Obesity plays a significant role in the degenerative diseases of later life."[119] Mayer maintained that the most important factor in overweight is inactivity.[120] Mayer, after much research into this field, wrote that he would recommend regular participation in exercises which were

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[116]Ibid.

[117]Ibid.

[118]George Stafford, Sports for the Handicapped (New York: Prentice-Hall, Inc., 1947), p. 221.

[119]R. C. Page, "Constructive Medicine and Industry," Journal of the American Medical Association, 132:57, September, 1946.

[120]Jean Mayer, Science and Medicine of Exercise and Sports (New York: Harper and Brothers, 1960), pp. 301-309.

adapted to one's physical potential.[121] Logically, then, it would appear that a program of special physical education will benefit the obese student significantly.

Daniels and Davies insisted that a careful medical examination should be given to determine the cause or causes of the condition. According to these writers, the physical educator must guide the obese student out of activities that he can do neither well nor safely.[122] Daniels and Davies wrote that:

> The teacher can do much to help these youngsters by guiding them to sources for basic treatment of their problem, by personal guidance and encouragement, and by providing the right kind of developmental experiences.[123]

Fait insisted that in planning activities for the obese student, the physical educator must select those activities which utilize energy; but does not require more strength and agility than the pupils possess.[124]

Recommended activities that Fait has found to be suitable for obese students are as follows:

1. Archery
2. Badminton
3. Basketball foul shooting
4. Bowling
5. Bowling on the green
6. Calisthenics

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[121] Ibid.

[122] Arthur S. Daniels and Evelyn A. Davies, Adapted Physical Education (New York: Harper and Row Publishers, 1965), pp. 299-300.

[123] Ibid., p. 302.

[124] Hollis F. Fait, Special Physical Education: adapted, corrective, developmental (Philadelphia: W. B. Saunders Company, 1966), p. 129.

7. Dancing (folk, social, and modern)
8. Football kicking for distance and accuracy
9. Jogging short distances
10. Log tennis
11. Shuffleboard
12. Tether ball
13. Touch football as lineman
14. Volleyball
15. Twenty-one
16. Table tennis
17. Light bag punching[125]

Malnutrition (Metabolic problems)

Stafford wrote that, "Malnutrition is a term used in connection with those who are improperly nourished."[126] For purposes of clarity in this study, malnutrition will identify the underweight person who has a metabolic problem. According to Bogart:

> . . . we may say that to be as much as seven to ten percent below the average weight for one's height usually means lowered vigor and physical efficiency, while to be more than ten percent underweight is apt to mean a reduction of vitality and stamina such as may be dangerous during the growing period.[127]

Fait insisted that, ". . . malnutrition, is a condition in which the body is not receiving the proper nutrients in sufficient quantities."[128] According to Fait, the physical educator should understand that it is possible for an individual to be underweight without being

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[125]Ibid.

[126]George Stafford, Sports for the Handicapped (New York: Prentice-Hall, Inc., 1947), p. 219.

[127]L. J. Bogart, Nutrition and Physical Fitness (Philadelphia: W. B. Saunders Company, 1932), p. 485.

[128]Hollis F. Fait, Special Physical Education: adapted, corrective, developmental (Philadelphia: W. B. Saunders Company, 1966), p. 122.

malnourished.[129] Fait also stated that, ". . . , no great improvement in physical proficiency can be expected until his nutritional deficiency is corrected."[130]

Daniels and Davies wrote that:

> The teacher can do much to help these youngsters by guiding them to sources for basic treatment of their problem; by personal guidance and encouragement, and by providing the right kind of developmental experience.[131]

Again, logically, it would appear that the student should participate in activities which his physique will permit reasonable success. The following activities are recommended for malnourished cases:

Athletic games

1. Badminton (doubles)
2. Baseball (short)
3. Bowling
4. Games of low organization which are usually offered to the secondary-school boy
5. Golf
6. Handball
7. Horseshoe pitching
8. Semi-organized games. All types which are usually offered to the secondary-school boy
9. Squash racquets
10. Tennis (doubles, deck, paddle, and table tennis)
11. Touch football
12. Volleyball

Combative sports

1. All combative sports of low organization which are usually offered to the secondary-school boy
2. Boxing
3. Fencing
4. Wrestling

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[129] Ibid.

[130] Ibid., p. 127.

[131] Arthur S. Daniels and Evelyn A. Davies, Adapted Physical Education (New York: Harper and Row Publishers, 1965), p. 302.

Dances. All types which are usually offered to the secondary-school boy.

Individual athletics and stunts

1. All tumbling stunts
2. Apparatus stunts
3. Field events, such as jumping and vaulting
4. Self-testing stunts

Relays. All relays which are usually offered to the secondary-school boy.

Aquatic sports. All the aquatic sports which are usually offered secondary-school boys, with the following exceptions and cautions:

1. Water polo is contraindicated
2. Water must be above 70 degrees F
3. Fatigue and heat unit loss must be avoided
4. Periods of activity should be shorter than for the normal pupil

Miscellaneous sports

1. Archery
2. Bag punching
3. Bait and fly casting
4. Bicycling
5. Camping
6. Climbing
7. Fishing
8. Hiking
9. Hunting
10. Juggling
11. Pistol and revolver shooting
12. Riding horseback
13. Skating (all forms)
14. Skiing
15. Tobogganing[132]

In working with students who are malnourished, Stafford insisted that fatigue must be avoided. He wrote that, "The student should be cautioned to stop his exercising before he feels tired."[133]

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[132]George Stafford, Sports for the Handicapped (New York: Prentice-Hall, Inc., 1947), pp. 225-226.

[133]Ibid.

Speech Disorders

Allen wrote that, ". . . youngsters with speech problems make up our largest group of exceptional children."[134] Garrison and Force insisted that, ". . . a child's speech is closely associated with his aspirations, his attitudes, and his feelings."[135] According to these writers a person's speech can never be separated from his self.

Speech and language disorders have been classified by Karlin as follows:

1. Delayed speech - retardation in acquisition and use of words
2. Articulatory disorders - the distortion, omission, and substitution of consonant sounds
3. Voice disorders - the absence of voice or abnormal production of the qualities (intensity, pitch, or melody) of voice
4. Cluttering - rapid speech, associated with slurring and distortion of sounds
5. Stuttering - disorganization of the rhythmic flow of speech
6. Aphasia - disorders of linguistic symbolization[136]

What then, is the solution to the problem of a student suffering from a speech disorder? The solution to the problem is, according to Daniels and Davies, an educational one. The student should be made to

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[134]Evelyn Young Allen, "The Child with Speech Defects," NEA Journal, 56:33, November, 1967.

[135]Karl C. Garrison and Dewey G. Force, Jr., The Psychology of Exceptional Children (New York: The Ronald Press Company, 1965), p. 185.

[136]I. Karlin, "Speech and Language Handicapped Children," Journal of Disabled Children, 95:370-376, December, 1958.

feel that he is an integral part of the school body. The physical educator is in an envious position to aid the student through socially gratifying activities.[137] Logically, then, it would appear that a pupil suffering from a speech disorder can participate in all of the activities that his age group engages in.

Epilepsy

Daniels and Davies insisted that epilepsy is a disease associated with the nervous system. According to these writers there are many types of epilepsy. However, the two most frequently occurring are petit (small) mal and grand (large) mal.[138] Christian wrote that, "The transient loss of consciousness without convulsive seizures is known as minor epilepsy, petit mal; the loss of consciousness with convulsive seizures is known as major epilepsy, grand mal."[139] Lennox emphasized that, ". . . perhaps three hundred thousand persons under twenty years of age are epileptic."[140] Because of the great incidence of this disease, it would appear that all teachers should become associated with the first

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[137]Arthur S. Daniels and Evelyn A. Davies, Adapted Physical Education (New York: Harper and Row Publishers, Inc., 1965), p. 207.

[138]Ibid., p. 217.

[139]Henry A. Christian, The Principles and Practices of Medicine (New York: Appleton-Century-Crofts, 1947), p. 1362.

[140]William G. Lennox, "Epilepsy--The Future Holds Hope," reprinted from The Crippled Child, December, 1947, p. 127.

aid treatment for pupils suffering from an attack of epilepsy.

Lennox wrote that, "Activity of muscle and mind is an antagonist of seizures."[141] Yahraes came out more strongly on the benefits of activity by declaring, "Exercise to the point of athletic conditioning is often the difference between success and failure of drug therapy in the treatment of epilepsy."[142] Logically, then, it would appear that physical education can help the epileptic student a great deal. Consequently, general activity is deemed to be beneficial to the epileptic both psychological and social.

The current trend in education today is to treat the epileptic as normally as possible. However, before a student engages in a program of special physical education, it should be approved by the school or family physician. Daniels and Davies wrote that, ". . . almost any vigorous sport is acceptable when participation is under good supervision and medical authorization received."[143]

Vannier and Fait have recommended the following activities for epileptics:

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[141]William G. Lennox and others, "The Higher Education of Epileptics," Journal of Health and Physical Education, 19:3, November, 1948.

[142]Herbert Yahraes, Now--A Brighter Future for the Epileptic, Public Affairs Committee, Pamphlet No. 98 (New York: Public Affairs Committee, 1962), p. 14.

[143]Arthur S. Daniels and Evelyn A. Davies, Adapted Physical Education (New York: Harper and Row Publishers, 1965), p. 234.

1. Folk, social, tap and modern dance
2. Bowling
3. Fly and bait casting
4. Table and card games
5. Hiking
6. Archery
7. Golf
8. Tennis
9. Badminton
10. Social recreational activities
11. Basic sport skills
12. Team games in which body contact has been largely eliminated, such as volleyball[144]

Daniels and Davies emphasized that:

> Those activities which require body contact, climbing activities, and those which usually elicit a highly emotional response, should not be engaged in by the epileptic student; aquatic activities may be engaged in only if expert supervision is possible.[145]

Daniels and Davies insisted that, "Especially good are the recreational type of individual and dual sports, like shuffleboard, archery, bowling, deck tennis, table tennis, paddle tennis, horseshoes, tennis, fencing and squash.[146]

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[144]Maryhelen Vannier and Hollis F. Fait, Teaching Physical Education in Secondary Schools (Philadelphia: W. B. Saunders Company, 1964), pp. 353-354.

[145]Daniels and Davies, op. cit., p. 232.

[146]Ibid., p. 235.

CHAPTER III

DESIGN OF THE STUDY

I. INTRODUCTION

This study was initiated with the following purposes: to conduct a survey of the existing physically handicapping conditions among students in selected public secondary schools in Northeastern and Central Kentucky; and to determine the need in regard to special physical education activities for the handicapped children in these schools. The secondary purpose of the study was to develop, for those schools, if any, in which the need had been expressed, recommendations for special physical education activities. The general approach was directed at eliciting answers to the three questions which appear in the analysis of the problem, page 8.

II. SOURCES OF DATA

The study included twelve public secondary schools which were affiliated with the Morehead State University Student Teaching Program in the 1967-68 school year. Only those principals who responded to a questionnaire stating that a set of appropriate recommendations of special physical education activities is needed in their high school were incorporated into the study.

The principal was selected as the source because he is the center of school life. The principal is in a position to know what programs are

needed in his school. He is in a position to be the axis of many converging influences. Howland wrote that, ". . . decisions for approval or disapproval of issues must be placed directly upon school officials if the best interests of children and school community are to be served."[1] Howland cited from the Twenty-sixth Yearbook of the American Association of School Administrators reiterating the philosophy of American education that provides as the right of every child in the school, ". . . education for every child in accordance with his needs and capacities--physical, mental and emotional."[2] It would appear that, according to Howland, school administrators should be vitally concerned with programs for the handicapped children in their care.

III. INSTRUMENTATION

A questionnaire was developed that was used to elicit the responses of twelve public secondary school principals in the Morehead State University service area. The purposes of the questionnaire were two: one purpose was to determine the number of students in school who were afflicted with a physical handicap; the other purpose was to record the evaluations made by the principals pertaining to the present status of physical education that existed in the schools. The principals were

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[1]Ivalclare Sprow Howland, Adapted Physical Education in Schools (Iowa: William C. Brown Company, 1959), p. 4.

[2]American Association of School Administrators, The Expanding Role of Education, Twenty-sixth Yearbook, 1948, p. 101, cited in Howland, op. cit., p. 5.

asked if a need existed for a program of special physical education in their school, if this need was presently being provided, and if they would like assistance in developing such a program.

A copy of the questionnaire, composed of eleven questions, appears in Appendix B, page 79. The first six questions of the questionnaire were developed to gain personal information concerning the people responding to this instrument. Question number seven was devised in order to ascertain the number of students afflicted with specific physical disabilities. The writer selected those handicapping conditions which were found by writers in the field of special physical education to be the most frequently occurring physical handicaps that beset secondary school students. Question number eight attempted to determine if a need was present in their specific school as to warrant a program of special physical education. Question number nine pertained to the provisions that are currently being provided for the physically handicapped students enrolled in their school. Question number ten was incorporated into the questionnaire to determine whether principals think an adequate program of special physical education is presently being provided for these atypical students. Question number eleven attempted to determine if the secondary school principal would be interested in assistance in developing a set of recommended special physical education activities in their school.

IV. PROCEDURES

The first question in the analysis of the problem deals with the

nature and frequency of the handicapping conditions that beset secondary school students in the Morehead State University service area.

The initial aspect of the study was the development of a questionnaire to accurately determine the number of students who were afflicted with a specific physical handicap. A description of the questionnaire, and how its component parts were developed, may be found under Instrumentation, page 56.

The questionnaire was hand-delivered to the principals of each of the twelve public high schools in Northeastern and Central Kentucky which were selected for this study. The questionnaire was delivered by the writer. In this study, the author elicited the secondary school principals' opinions regarding a program of special physical education.

Approximately two weeks after the questionnaire was delivered the writer returned to the schools, collected the questionnaires, and tabulated and analyzed the results. The results of the returned questionnaires were analyzed according to the number of handicapping conditions that were found to exist in each school. A contingency table was developed to show the number of handicapping conditions that existed in each school.

The second question in the analysis of the problem deals with a need for recommended special physical education activities in these schools. The questionnaire was designed to determine whether a need exists for the development of a set of recommended special physical education activities in the Morehead State University service area. The questionnaires were analyzed to determine if, in the principals' opinion,

a need was present for a program of special physical education in each specific school; to determine the current provisions being provided for those physically handicapped students; to establish if an adequate program of special physical education is currently being provided; and to determine if the principals would be interested in assistance in developing a set of recommended special physical education activities. If, in the opinion of the principal, the need was of significant magnitude in his school as to warrant a set of appropriate recommended activities, the author was to develop recommendations of this nature, and adapt them to the individual students needs. Only those schools whose principals stated that they would like assistance in developing specific recommended special physical education activities were incorporated into the study.

The third question in the analysis of the problem was concerned with developing an appropriate set of recommended special physical education activities. It was discovered that ten of eleven principals felt that their schools were not adequately meeting the needs of the physically handicapped students. The writer developed a set of appropriate recommendations of special physical education activities to meet these needs.

Characteristics were defined and listed for all of the physically handicapping conditions with which this study was concerned. This phase of the procedure necessitated reading as much relevant literature as could be obtained. All of the writers who were investigated appeared to be in full agreement as to the definition of, and the characteristics

associated with, each physical handicap.

In order for a valid criterion of adapted and corrective activities to be established, the researcher selected those activities that have been found successful by writers in the field of special physical education. The initial phase for the selection of these recommended special physical education activities obligated the writer to read all relevant literature concerning this matter. All of the writers were in agreement on what activities would be the most beneficial to these handicapped students. In the case of only one writer listing selected activities for a specific handicap, the researcher accepted his concept in light of the fact that not a great deal of material was available.

The author found it essential to determine what physically handicapping conditions would necessitate placing a child in a special physical education class. Medical authorities in Morehead, Kentucky, were all in agreement that students having the following handicapping conditions should be placed in a special physical education class:

1. Anemia
2. Club foot
3. Amputations
4. Polio
5. Cardiopathic conditions
6. Cerebral palsy
7. Asthma
8. Orthopedic disabilities (crippled)
9. Convalescence from illness and injuries (at least three months in duration)
10. Malnutrition (metabolic problems)[3]

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[3]Statements by Dr. Warren H. Proudfoot, M.D., Mrs. Warren Proudfoot, R.N., Dr. Louise Caudill, M.D., personal interview.

CHAPTER IV

COLLECTION AND ANALYSIS OF DATA

I. ADMINISTRATION OF THE INSTRUMENT

The initial study of the administration of the questionnaire indicated a need for a visit with each of the twelve selected secondary schools with which this study was concerned. The questionnaire was hand-delivered to the principals of each of these schools in Northeastern and Central Kentucky. The instrument was delivered in person in order to develop a working rapport with the principals. The questionnaire was explained in its entirety. Again, this was done in order to build further validity into the study.

All aspects of the research were explained to the principals. The importance of the study was outlined; not only for its immediate relevancy, but also in regard to its futuristic implications. These procedures made for reasonable certainty that every question had the same meaning to each principal.

The researcher and principal agreed on a day that would be mutually convenient to collect the completed questionnaire. Approximately two weeks after the questionnaire was delivered a return visit was made to the schools and the instruments were collected.

Although twelve secondary schools were initially incorporated into the study, only eleven schools responded with a completed questionnaire. School "L" was visited three times, but no response was received.

Additionally, a letter was sent with a self addressed stamped envelope and another questionnaire, in the hope that the principal would complete the enclosed questionnaire. A copy of this letter appears in Appendix A, page 77. However, the school disregarded all means of communications, and ignored the attempts made to participate in the study. Consequently, the results of the eleven questionnaires were tabulated and analyzed.

II. TABULATION OF DATA

The initial aspect of the study was to accurately determine the number of students who were afflicted with a specific physical handicap in the 1967-68 school year. A contingency table was developed to determine the nature and frequency of the handicapping conditions that beset secondary school students in each of the eleven selected secondary schools.

Responses to the three questions in the analysis of the problem yielded these findings, which are presented in the following table:

TABLE I

FREQUENCY OF HANDICAPPING CONDITIONS IN THE MOREHEAD STATE UNIVERSITY SERVICE AREA

Handicapping Conditions	*School	A	B	C	D	E	F	G	H	I	J	K	
	Enrollment	125	668	810	580	750	380	840	410	525	385	400	N
Anemia		0	4	1	10	10	0	6	5	0	8	0	44
Club Foot		0	2	0	0	0	0	0	0	0	2	0	4
Amputations		0	0	2	0	0	0	0	0	1	0	0	3
Polio		0	0	0	1	0	0	3	2	3	6	0	15
Cardiopathic Conditions		0	4	0	3	2	2	2	6	0	5	0	24
Cerebral Palsy		0	2	1	0	0	0	0	0	0	0	0	3
Orthopedic Disabilities (crippled)		0	2	1	2	0	1	4	0	10	2	0	22
Visual Limitations:													
Seeing 20/200 (corrected)		2	3	1	5	1	0	1	1	0	0	0	14
Blind		0	0	0	0	0	0	0	0	0	0	0	0
Auditory Limitations:													
Hearing loss up to 35 decibels		0	3	0	8	5	0	2	0	0	0	0	18
Hearing loss between 35-60 decibels		0	2	1	0	2	0	3	0	0	0	0	8
Hearing loss above 60 decibels		0	10	0	0	0	0	0	0	0	0	0	10
Diabetes		0	2	0	0	5	0	3	1	2	3	0	16
Asthma		1	5	1	5	5	3	4	2	5	3	0	34
Dysmenorrhea		0	0	0	75	15	0	0	5	0	10	0	105
Convalescence from illness and injuries at least 3 months in duration		0	0	0	1	1	1	0	6	2	0	0	11
Obesity (a tolerance scale of 25% of the student's weight)		6	4	10	25	13	1	4	1	3	10	1	78
Malnutrition (metabolic problems)		0	2	0	9	30	0	4	0	0	10	0	55
Speech disorder		3	14	3	7	10	2	15	3	3	5	0	65
Epilepsy		0	2	1	3	2	2	1	1	0	3	0	15
Totals (May, 1968)		12	61	22	154	101	12	52	33	29	67	1	

*Identification of these schools may be found in Appendix C, page 82.

III. ANALYSIS OF DATA

The second question in the analysis of the problem deals with a need for appropriate special physical education activities in the schools involved in the study. A questionnaire was developed to elicit the responses of the principals in these schools.

The questionnaire was designed to determine whether a need existed for the development of an appropriate set of recommended special physical education activities in the Morehead State University service area. The questionnaires were analyzed to determine if the principals believed that a need existed for a program of special physical education in their specific school. These questions were designed:

1. To determine the current provisions being provided for those physically handicapped students.
2. To establish if an adequate program of special physical education is currently being provided.
3. To determine if the principals would be interested in assistance in developing a set of recommended special physical education activities.

The responses to the above questions were analyzed as follows:

1. Five principals stated that the need was of significant magnitude in their schools as to warrant a program of special physical education.
2. Six principals expressed their opinions that the need was not of significant measure.
3. The principals signified that the following provisions are currently being provided for the physically handicapped students in their schools:
   a. Clinics 5
   b. Hospitals 5
   c. Rehabilitation Centers 4
   d. Classroom 4
   e. Home Instruction 8

f. Physical Therapy Units 0
g. Church 4
h. YMCA 0
i. Itinerant 0
j. Home and Hospital Instruction 4
k. Others: Explain 0

4. Ten principals expressed their opinions that an adequate program of special physical education was not currently being provided for the physically handicapped students in their schools. One principal was of the opinion that this need was currently being met.
5. Ten principals stated that they would be interested in assistance in developing such a program of special physical education. One principal was of the belief that he would not require help in developing a program of this nature.

When the data were subjected to the analytical procedures, nine significant inferences would seem to be warranted:

1. One principal stated that an adequate program of special physical education currently was being provided; but he also stated that he would like assistance in developing his program further.
2. One principal was of the belief that an adequate program of special physical education was not currently being provided in his school; but he reported that he would not be interested in assistance in developing a program of this nature.
3. In the eleven selected secondary schools, there was no report of any student afflicted with blindness--unable to read large print.
4. The most frequently occurring physically handicapping condition, as reported from this study, was dysmenorrhea. However, this statement may be misleading. Seven of the eleven principals reported that no cases of dysmenorrhea were found at their schools. Only four schools reported this handicap; and of this number, one principal stated that seventy-five girls were afflicted with this physical handicap.
5. Every principal in this study reported at least one case of obesity.
6. Speech disorders were reported to exist in ten of the eleven schools.
7. A hearing loss above sixty decibels was reported to exist in only one school.
8. No church, YMCA, or physical therapy units are presently being provided for these physically handicapped students in or around these schools.

9. The most frequently occurring physically handicapping conditions were all incorporated into the study. This finding was substantiated in that no principal reported that there were any other physically handicapping conditions in existance in his school.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

I. SUMMARY

The primary purposes of this study were: to conduct a survey of the existing physically handicapping conditions among students in selected public secondary schools in Northeastern and Central Kentucky; and to determine the need in regard to special physical education activities for the handicapped children in these schools. The secondary purpose of this study was to develop, for those schools, if any, in which the need had been expressed, recommendations for special physical education activities.

The study was limited to twelve public secondary schools in Northeastern and Central Kentucky who were affiliated with the Morehead State University Student Teaching Program in the 1967-68 school year. These schools were chosen because they were representative of the districts that surrounded, and were adjacent to, the Morehead State University service area.

The validity of the data for this study was highly reliant upon a questionnaire that was used to elicit the responses of principals of the chosen high schools in the selected service area. This research was operative under certain limitations which were imposed by the narrow variety of handicapping conditions. Only those physically handicapping conditions that were found by writers in the field of special physical education, to be the most frequently occurring in today's public schools

were used.

This research did not concern itself with the mentally retarded student. The line of demarcation for those students incorporated into the study was an IQ of seventy minimum. This study did not include the psychological characteristics that may be associated with a handicapped student. Only those students with physically handicapping conditions that existed for at least three months in duration were included. Finally, this study did not include an evaluation of the practicality of the recommended special physical education activities. This study was limited in scope because it was not possible to know whether the physical education teacher could, in fact, administer an adequate program of special physical education.

This research obligated the author to proceed under four basic assumptions:

1. There is a need in secondary schools for the type of physical education program that has as its chief purpose corrective and adapted outcomes.
2. There are certain activities in the field of physical education that are regarded as being adapted and corrective in their nature.
3. An appropriate set of recommendations of adapted and corrective activities can be developed for the physically handicapped students in the Morehead State University service area.
4. The high school principals that were selected to furnish information vital to the success of the study gave accurate and unbiased responses.

A questionnaire was developed that was used to elicit the responses of twelve public secondary school principals in the Morehead State University service area. The purposes of the questionnaire were two: one purpose was to determine the number of students in school who were

afflicted with a physical handicap; the other purpose was to record the evaluations made by the principals pertaining to the present status of physical education that existed in the schools.

The questionnaire was hand-delivered, by the writer, to the principals of each of the twelve public secondary schools in Northeastern and Central Kentucky which were selected for this study. Approximately two weeks after the questionnaire was delivered, the writer returned to the schools, collected the completed questionnaires, and tabulated and analyzed the results. The results of the returned questionnaires were analyzed according to the number of handicapping conditions that were found to exist in each school.

II. CONCLUSIONS

The collection of materials which were obtained from the study tended to produce two different types of data, namely; statements from specialists in the field of special physical education, and responses from eleven of the twelve principals incorporated into the study. Upon analysis of these data, the following conclusions would appear to be warranted:

1. An analysis of statements from specialists in the field of special physical education suggest specific activities that have been found to be successful in the field of special physical education. (For reasons of expediancy, and in an effort to avoid redundancy, these numerous activities are not presented in this section; but they are to be found in great detail in Chapter II.)
2. A need exists for the development of a set of recommended special physical education activities in the Morehead State University service area.

3. An adequate program of special physical education is not currently being provided for the physically handicapped students within the public high schools in Northeastern and Central Kentucky.
4. There is not an adequate program of special physical education currently being provided for students at the undergraduate or graduate level in the Morehead State University curriculum.

III. RECOMMENDATIONS

The analysis of the data which were collected in the processes of completing this study appears to warrant the following recommendations:

1. A continuing evaluation of the physical condition of the individual student should be incorporated into any program of physical education.
2. A cumulative health file should be kept up to date on each child in school.
3. It is recommended that schools work closely with physicians and nurses in order to most nearly provide adequate and appropriate Student Health Service.
4. Physical therapy units should be placed strategically to afford all physically handicapped children an opportunity to be educated to their fullest potential.
5. Appropriate charts and information be made accessible to and convenient for the students in order that they may become more adequately informed of the nature and prognosis of their handicapping conditions.
6. Additional studies should be initiated to help these physically handicapped students.

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APPENDIX A

University P. O. Box 469
Morehead State University
Morehead, Kentucky 40351
April 18, 1968

Mr. "X"
School "L"

Dear Mr. "X":

On February 8, 1968, a questionnaire was hand-delivered to you. As of yet the completed questionnaire has not been received. Undoubtedly you have been busy and have had good reason for not completing and returning it. Your contributions, comments, and observations are important to the success of this study.

If you have not yet completed and mailed the questionnaire, would you kindly take a few minutes and complete the enclosed questionnaire? It would be greatly appreciated.

A self addressed, stamped envelope in which the questionnaire may be returned is included for your convenience. Your immediate attention to this matter would be extremely helpful.

Yours truly,

Robert E. Cipriano

Project approved:
Dr. Jost Yff
Head of Educational
Research

APPENDIX B

Inquiry Concerning Handicapping Conditions of

Students in Selected Secondary Schools in

Northeastern and Central Kentucky

March 1, 1968 - July, 1968

1. Name _____ (It is only necessary to give this information if you are interested in receiving the results of this study.)

2. Name of School _____
   Enrollment _____

3. City, Township, District, or other _____

4. Present position _____

5. Highest degree held:

   No degree . . . . . ( )
   Bachelors . . . . . ( )
   Masters (or Bachelor plus 30) . . . . . ( )
   Specialist (or Masters plus 30) . . . . . ( )
   Doctors (or Specialist plus 30) . . . . . ( )

6. Number of years teaching experience (including the present year) . . . . . ( )

7. Handicapping conditions - Number of students afflicted:

   a. Anemia . . . . . ( )
   b. Club Foot . . . . . ( )
   c. Amputations . . . . . ( )
   d. Polio . . . . . ( )
   e. Cardiopathic conditions . . . . . ( )
   f. Cerebral Palsy . . . . . ( )
   g. Orthopedic disabilities (crippled) . . . . . ( )
   h. Visual limitations:
      1) Seeing 20/200 - able to read large print . . . . . ( )
      2) Blind - unable to read large print . . . . . ( )
   i. Auditory limitations:
      1) Hearing loss up to 35 decibels . . . . . ( )
      2) Hearing loss between 35-60 decibels . . . . . ( )
      3) Hearing loss above 60 decibels: . . . . . ( )
         a) Little or no naturally acquired speech and language . . . . . ( )

j. Diabetes . . . . . ( )
k. Asthma . . . . . ( )
l. Dysmenorrhea . . . . . ( )
m. Convalescence from illness and injuries (at least 3 months in duration) . . . . . ( )
n. Obesity (a tolerance scale of 25% of the student's weight) . . . . . ( )
o. Malnutrition (metabolic problems) . . . . . ( )
p. Speech disorder . . . . . ( )
q. Epilepsy . . . . . ( )
r. Others: Explain . . . . . ( )

_____

8. Do you believe that the number of children with specific physical handicaps (see listing above) in your schools is of such magnitude as to warrant a program of special physical education?
Yes ____ No ____

9. Check the provisions that are presently being provided for these physically handicapped students:

a. Clinics . . . . . ( )
b. Hospitals . . . . . ( )
c. Rehabilitation Centers . . . . . ( )
d. Classroom . . . . . ( )
e. Home Instruction . . . . . ( )
f. Physical Therapy Units . . . . . ( )
g. Church . . . . . ( )
h. YMCA . . . . . ( )
i. Itinerant . . . . . ( )
j. Home and Hospital Instruction . . . . . ( )
k. Others: Explain . . . . . ( )

_____

10. Is an adequate program of special physical education currently being provided? Yes ____ No ____

11. Would you be interested in assistance in developing such a program of special physical education? Yes ____ No ____

APPENDIX C

IDENTIFICATION OF SCHOOLS INCORPORATED

INTO THE STUDY

A . . . . . University Breckinridge School

B . . . . . Rowan County High School

C . . . . . Harrison County High School

D . . . . . Bath County High School

E . . . . . Bourbon County High School

F . . . . . Nicholas County High School

G . . . . . Russell High School

H . . . . . Louisa High School

I . . . . . Olive Hill High School

J . . . . . Sandy Hook High School

K . . . . . Paris High School

L . . . . . Paul Blazer High School